

§ 175.701

49 CFR Ch. I (10–1–14 Edition)

(A) 50 on a non-exclusive use cargo aircraft, or

(B) 100 on an aircraft assigned for the exclusive use of the shipper [offeror] for the specific shipment of fissile Class 7 material. Instructions for the exclusive use must be developed by the shipper [offeror] and carrier, and the instructions must accompany the shipping papers.

(3) The combined transport index and combined criticality index are determined by adding together the transport index and criticality index numbers, respectively, shown on the labels of the individual packages.

(c) No person may carry in a passenger-carrying aircraft any package required to be labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III label unless the package is carried on the floor of the cargo compartment or freight container.

[71 FR 14604, Mar. 22, 2006, as amended at 74 FR 2268, Jan. 14, 2009]

§ 175.701 Separation distance requirements for packages containing Class 7 (radioactive) materials in passenger-carrying aircraft.

(a) The following table prescribes the minimum separation distances that must be maintained in a passenger-carrying aircraft between Class 7 (radioactive) materials labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III and passengers and crew:

Transport index or sum of transport indexes of all packages in the aircraft or predesignated area	Minimum separation distances	
	Centimeters	Inches
0.1 to 1.0	30	12
1.1 to 2.0	50	20
2.1 to 3.0	70	28
3.1 to 4.0	85	34
4.1 to 5.0	100	40
5.1 to 6.0	115	46
6.1 to 7.0	130	52
7.1 to 8.0	145	57
8.1 to 9.0	155	61
9.1 to 10.0	165	65
10.1 to 11.0	175	69
11.1 to 12.0	185	73
12.1 to 13.0	195	77
13.1 to 14.0	205	81
14.1 to 15.0	215	85
15.1 to 16.0	225	89
16.1 to 17.0	235	93
17.1 to 18.0	245	97
18.1 to 20.0	260	102
20.1 to 25.0	290	114
25.1 to 30.0	320	126
30.1 to 35.0	350	138
35.1 to 40.0	375	148

Transport index or sum of transport indexes of all packages in the aircraft or predesignated area	Minimum separation distances	
	Centimeters	Inches
40.1 to 45.0	400	157
45.1 to 50.0	425	167

(b) When transported aboard passenger-carrying aircraft packages, overpacks or freight containers labeled Radioactive Yellow-II or Radioactive Yellow-III must be separated from live animals by a distance of at least 0.5 m (20 inches) for journeys not exceeding 24 hours, and by a distance of at least 1.0 m (39 inches) for journeys longer than 24 hours.

(c) Except as provided in paragraph (d) of this section, the minimum separation distances prescribed in paragraphs (a) and (b) of this section are determined by measuring the shortest distance between the surfaces of the Class 7 (radioactive) materials package and the surfaces bounding the space occupied by passengers or animals. If more than one package of Class 7 (radioactive) materials is placed in a passenger-carrying aircraft, the minimum separation distance for these packages shall be determined in accordance with paragraphs (a) and (b) of this section on the basis of the sum of the transport index numbers of the individual packages or overpacks.

(d) *Predesignated areas.* A package labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III may be carried in a passenger-carrying aircraft in accordance with a system of predesignated areas established by the aircraft operator. Each aircraft operator that elects to use a system of predesignated areas shall submit a detailed description of the proposed system to the Associate Administrator for approval prior to implementation of the system. A proposed system of predesignated areas is approved if the Associate Administrator determines that it is designed to assure that:

(1) The packages can be placed in each predesignated area in accordance with the minimum separation distances prescribed in paragraph (a) of this section; and

(2) The predesignated areas are separated from each other by minimum distance equal to at least four times the distances required by paragraphs (a)

and (b) of this section for the predesignated area containing packages with the largest sum of transport indexes.

§ 175.702 Separation distance requirements for packages containing Class 7 (radioactive) materials in cargo aircraft.

(a) No person may carry in a cargo aircraft any package required by § 172.403 of this subchapter to be labeled Radioactive Yellow-II or Radioactive Yellow-III unless:

(1) The total transport index for all packages does not exceed 50.0 and the

packages are carried in accordance with § 175.701(a); or

(2) The total transport index for all packages exceeds 50.0; and

(i) The separation distance between the surfaces of the radioactive materials packages, overpacks or freight containers and any space occupied by live animals is at least 0.5 m (20 inches) for journeys not exceeding 24 hours and at least 1.0 m (39 inches) for journeys longer than 24 hours; and

(ii) The minimum separation distances between the radioactive material and any areas occupied by persons that are specified in the following table are maintained:

Transport index or sum of transport indexes of all packages in the aircraft or predesignated area	Minimum separation distances	
	Centimeters	Inches
50.1 to 60.0	465	183
60.1 to 70.0	505	199
70.1 to 80.0	545	215
80.1 to 90.0	580	228
90.1 to 100.0	610	240
100.1 to 110.0	645	254
110.1 to 120.0	670	264
120.1 to 130.0	700	276
130.1 to 140.0	730	287
140.1 to 150.0	755	297
150.1 to 160.0	780	307
160.1 to 170.0	805	317
170.1 to 180.0	830	327
180.1 to 190.0	855	337
190.1 to 200.0	875	344

(b) In addition to the limits on combined criticality safety indexes stated in § 175.700(b),

(1) The criticality safety index of any single group of packages must not exceed 50.0 (as used in this section, the term “group of packages” means packages that are separated from each other in an aircraft by a distance of 6 m (20 feet) or less); and

(2) Each group of packages must be separated from every other group in the aircraft by not less than 6 m (20 feet), measured from the outer surface of each group.

[71 FR 14604, Mar. 22, 2006, as amended at 71 FR 54396, Sept. 14, 2006; 77 FR 60943, Oct. 5, 2012; 79 FR 40618, July 11, 2014]

§ 175.703 Other special requirements for the acceptance and carriage of packages containing Class 7 materials.

(a) No person may accept for carriage in an aircraft packages of Class 7 materials, other than limited quantities, contained in a rigid or non-rigid overpack, including a fiberboard box or plastic bag, unless they have been prepared for shipment in accordance with § 172.403(h) of this subchapter.

(b) Each shipment of fissile material packages must conform to the requirements of §§ 173.457 and 173.459 of this subchapter.

(c) No person shall offer or accept for transportation, or transport, by air—

(1) Vented Type B(M) packages, packages which require external cooling by an ancillary cooling system or packages subject to operational controls during transport; or